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THE THREE FACES OF THE COIN:
A socio-economic approach to the institution of money

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ABSTRACT

This paper develops a broad, multi-faceted approach to the socio-economics of money. The aim is to elaborate models with which to describe and analyze money and money systems in modern societies. No single theory is conceivable but a complex of interlinked theories can help us understand and explain many aspects of money: (1) money as a means to represent and communicate value; (2) money as technology (money, like other technologies such as keys, carpenter tools, automobiles, factories, and nuclear power stations, embodies in its design particular rules and collective representation(s) and is associated with a variety of techniques for using it); (3) monetary orders as socio-technical systems that are in part designed, administered and regulated (there are institutional arrangements or rule regimes -- in particular the monetary order and policy, property rights, and markets -- relating to access, control, use, and management of money and money processes); (4) multiple perspectives, meanings, and uses of money within diverse institutional domains and social settings, for instance, the universalizing qualities of money as well as its particularization in concrete social and moral settings; (5) contradictory uses and purposes of money in modern societies: among others, as a medium of exchange, as a standard or measure of value; as a basis for expanding productive capacity ("capital") or initiating projects and programs; as a source of social power.

Section I examines the meaning and normative regulation of money and money uses. Section II introduces and develops the idea of money- or exchange-value as distinct from substantive-, use-, or particularistic-values, and the transformation of one type of value into another through particular institutional arrangements and processes, e.g. markets. Section III analyzes the social construction of money through complex institutional processes and the establishment and maintenance of binding definitions of the social fact or reality of money. In Section IV we consider the regulation and stabilization of money systems -- as complex, changing systems that may fail or collapse, causing widespread economic, social, and political crises. Section V provides a summary of a number of key points and conclusions.

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INTRODUCTION

Money is a major, ubiquitous but elusive social construction. Many of its institutional and symbolic features are apparent. Less obvious perhaps is money's materiality. Money is a socially defined and accepted rule or rule system that defines and supports some object or material as a *medium of exchange.* To effectively accomplish this function, it has to fulfill certain *material requirements* of convenience, durability, and divisibility. Among the types of money are: (1) *commodity "money"* -- anything with intrinsic value which is generally acceptable for payment or exchange. Objects such as shells, cattle, salt, furs, coins of gold or silver, etc have functioned as money (see later). In a certain sense, exchange with such valuables is close to "barter" and the concept and utilization of the valuable as money emerged through repeated interactions and organic processes (see below).[1] (2) *fiat money* -- bits of paper, pieces of metal, or magnetic traces declared to be "money", that is, a medium of exchange, by some authority, the Prince, an official agency, a government or a specific type of bank. Such money may or may not be convertible to gold or other recognized and trusted currency. That is, in a certain sense all monies are *social constructions*, whether it be bank notes, accounting money, plastic and electronic monies, or metals. What distinguishes different types of money is the type of materiality, its particular creator and regulator, the bases of trust in it and its security.

As economists would emphasize, money not only serves as a generalized means of payment or exchange. It also often serves as a unit of account,[2] thus enabling actors to assess and compare the exchange- or market-value of different goods, services, obligations, rights, or any entity that can be purchased or is marketable. It symbolizes, therefore, a type of value, relating to market- or exchange-value. Actors develop collective representations and cognitive frames and techniques that allow them to utilize money competently, to make assessments and decisions, and take actions, relating to money use and money flows. They also are bearers of and enact rule regimes for defining the meaning of the symbol and the rights and obligations (e.g., property rights and administrative orders) regulating access to its use, management and maintenance. Money is more than simply a basis for representing and communicating a certain type of value. Modern money is a rationalizing technology. It enables a high degree of standardization, systematization, and universalization (Simmel, 1978). It functions in a way that most economists understand, not only in the transactions between different economic agents but between different domains and segments of society. In this it plays an integrative role at the same time that it facilitates an elaborate division of labor and differentiation of society.

Monetary systems increasingly rely on *different types of fiat money*, some of which are very intangible forms for most of us -- appearing as magnetic traces in computer memories (the material basis for account keeping, as discussed below).[3] Monetary transactions take place by means of cheques, credit-cards, and by credit-transfer, where one account is reduced (debited) and another increased (credited) by the same amount electronically. Traditional monies were commodity monies, consisting of objects such as shells or pieces of silver having an *intrinsic value* of their own. After having dematerialized money from its valuable commodity basis (gold, silver, etc.), modern systems are pushing this logic one step further by reducing the dependence on physical notes and coins, that is "cash," hence the somewhat misleading concept of the "cashless society". The intrinsic value of most monies today is minimal or non-existent. This already points to the key basic issue of the existence and reproduction of money systems: social trust. Money also serves often (but not invariably) as a *storage of value*. In the case of a money with intrinsic value, the material is expected to endure. The material of fiat money is also expected to be durable. Even the signs in bank balance books or magnetic traces in computer systems are required and expected to have a

substantial half-life. This is a material requisite and necessary condition for commodity money to serve as an effective storage of value. But money is obviously not simply material (whether gold, silver, paper, or markings in ledgers). It is a symbol of a type of value, an entity constructed and defined within a cultural-institutional framework, that is, particular cultural forms and institutional arrangements. To be a store of value in the case of token money requires social trust, an implicit social contract among the members of society that this token of money will be accepted in the future and everywhere as a means of payment.

Since money is an artifact, it is a special type of *material technology* (Burns and Flam, 1987; Burns and Dietz, 1992b), It must consist of resistant materials This material(s) should be such that its production can exclusively be carried out by its creator and manager of the money system. On the other hand, the materials cannot be of a "sacred character". Holy objects cannot be made into a general money. Over a substantial period of the evolution of money, money materials in the case of commodity money had an "intrinsic" socially determined value (as in the case of gold, silver, or copper). Even purely fiat monies, such as banknotes, letters of credit, and paper money, were guaranteed by being exchangeable for valuables.

A monetary order may be created for particular -- and potentially contradictory -- purposes such as to provide a general medium of exchange, to store value, and, as a source of investment, to initiate projects and developments, etc. Actors may discover also that they can use the money for purposes not anticipated, or to use it in ways different from those planned by policymakers and managers of the money system. Typically, any technology may be put to uses never intended or imagined -- indeed, human agency often entails the transfer of a use from one domain or context to another, or in any given context to use the technology in new and previously unanticipated ways.

The money technology, like any other technology, entails in its use risks. It can be stolen or counterfeited. It can be debased or loose its value (even becoming worthless when a monetary order collapses). Money users and managers learn to define dangers and risks, developing strategies to deal with these. Central banks -- as well as the banks that are strategic in mediating money flows, managing deposits and safeguarding of money, mobilizing and loaning money -- develop models and regulative strategies as well as normative guidelines to assure a high level of *security*, for instance, protection against major *dangers* and *risks*. One major risk is that people come to distrust the banks and "run" on them, withdrawing deposits; or they lose confidence in the money and develop a preference for other currencies or more secure valuables (gold, precious stones, land), refusing to accept payment in the money. Indeed, the effective functioning of any monetary order, its banks, and money exchange and flows depends on collective trust and on normative and social control processes that maintain and reinforce such trust, a conception we develop later.

Practical measures (i.e. prudential regulation) are institutionalized to establish or maintain security, to protect against, for example, the collapse of individual banks, the erosion of money value, counterfeiting, the loss of trust in the banking system. Measures taken by the policy makers and managers of a money system include "objective" ones, such as regulating the expansion and terms of credit, exercising checks and controls at all levels of banking and monetary performance. Because fiat money and money systems depend to a high degree on people's trust in the monetary system over time and space, confidence in its authorities and managers, and in the worth of money itself, the measures enacted to achieve this are not simply objective or real ones. There are often many symbolic measures: the performance of public rituals and the formulation of persuasive discourses to convey the message that the security of the money system, its banks, its managers, the currency itself is solid, a social fact -- everything is in proper and effective order! Thus, people may trust in -- and rely on

their actions and interactions upon -- the system and its currency. But, as we shall see, this may be no small task.

This paper introduces a number of concepts and develops models with which to describe and analyze money and money systems in modern societies. The aim is to develop a broad, multi-faceted approach to the *socio-economics of money*. No single theory is conceivable (cf. Dodd, 1994) but a complex of inter-relatable theories can help us understand and explain many aspects of money as well as money systems: (1) money as a means to represent and communicate value; (2) money as technology (money, like other technologies such as keys, carpenter tools, automobiles, factories, and nuclear power stations, embodies in its design particular rules and collective representation(s) and is associated with a variety of techniques for using it); (3) monetary orders as socio-technical systems that are in part designed, administered and regulated (There are institutional arrangements or rule regimes -- in particular a monetary order and policy, property rights, and markets -- relating to access, control, use, and management of money and money processes). (4) the multiple perspectives, meanings, and uses of money within different institutional domains and social settings, for instance, the universalizing qualities of money as well as its particularization aspects in concrete social domains and settings; (5) contradictory uses and purposes of money in modern societies: as a medium of exchange, as a standard or measure of value; as a basis for expanding productive capacity ("capital"), for instance, initiating projects and programs; as a source of social power, etc.

Taking all those aspects together makes money a tri-faceted social institution: a symbolic asset, a socio-economic mean of exchange, and a cultural device. Partly along such lines, there are three approaches to the social institution of money. The first is an anthropological one, which has its roots in the work of Simmel (1978), but is best exemplified by Agliettea and Orléan (1982, 2002) and Codere (1968) and usefully complemented by historical and ethnology studies (Testart, 2002).[4] The second approach is clearly the economic one, although it is far from unified (see, for instance, Clower (1969)). Quite the contrary, money in economic theory has been and still is the subject of heated controversies and has produced an enormous literature. There is quite a divergence: From the traditional neo-classical approach, the quantity theory of money rooted in the perfectly competitive general equilibrium tradition (see for example, Friedman (1956) but also in a different perspective Tobin (1969)) to the post-Keynesian approach to money as an endogenous variable (Davidson 1978), and from Keynes' *Treatise of Money* through Leijonhufvud's (1968) non-walrasian interpretation of Keynes to the Lucas, Wallace and Sargent "classical macroeconomics" world.. The substantial conceptual and theoretical differences between these approaches suggests in our view that money resists the unidimensional, mono-disciplinary approach that economics tends to support, but has thus far failed to realize. The third approach, ours, tries to embed the economic and anthropological approaches into a more general socio-economic systems framework. It does not pretend to be more comprehensive or more enlightened than the two other approaches. On the contrary, we firmly believe that these three approaches are complementary and that each of them implicitly or explicitly refers to the other two. Each one sheds a different light on some of the key features of money as a societal phenomena related to the cohesion but also the fragility of modern societies.

Much of the paper draws on earlier work (Andersen and Burns, 1992; Baumgartner et al, 1986; Burns et al, 1985; Burns and Carson, 2002; Burns and Dietz, 1992a, 1992b; Burns and Flam, 1987; Burns et al, 1987; DeVille and Burns, 1976) dealing with institutional and cultural phenomena, and analyzing money and banking systems with in such a general framework. Section I examines the meaning and normative regulation

of money and money uses. Section II introduces and develops the idea of money- or exchange-value as distinct from substantive-, use-, or particularistic-values, and the transformation of one type of value into another through particular institutional arrangements and processes, e.g. markets. Section III analyzes the social construction of money through institutional alchemy and the establishment and maintenance of binding definitions of the reality or social fact. In Section IV we consider the regulation and stabilization of money systems -- as complex, changing systems that may fail or collapse, causing widespread economic, social, and political crises. Section V provides a summary of our several key points and conclusions.

I. THE CONTEXTUALIZATION AND NORMATIVE REGULATION OF MONEY

Economists typically stress the universal, non-contextualized and decontextualizing aspects of money -- and focus on economic behavior in relation to money based on "instrumental rationality" as the methodological foundation of their science. Sociology as well as other social sciences orients us -- makes us alert -- to the powerful forces of particularization that operate in spite of and often in opposition to money-universalization. Of special interest in our perspective is the interplay between universalizing and particularizing processes in relation to money

While modern money may be a general purpose medium of exchange -- and in a certain sense "universal" -- human agents divide up the world differentiating distinct domains, each more or less with its particular purposes, norms, roles, and institutionalized values and relationships (Burns and Flam, 1987, Chapters 7 and 17). Each rule system constituting and regulating an institutional domain introduces distinctions, category systems, restrictions and controls -- a particular moral world -- that play a key role in the earmarking of money and money flows and the investment of particular designated monies in activities, projects and programs within each domain. Zelizer (1994:18-19:142) argues, somewhat overstating however this important point: "There is no single, uniform, generalized money; but multiple monies: people earmark different currencies for many or perhaps all types of interactions, much as they create distinctive languages for different social contexts. And people will in fact respond with anger, shock, or ridicule to the "misuse" of monies for the wrong circumstances such as offering a thousand-dollar bill to pay for a newspaper or tipping a restaurant's owner. Money used for rational instrumental exchanges is not "free" from social constraints... ...Money has not become the free, neutral, and dangerous destroyer of social relations."

In sum, money has different societal meanings in different institutional domains or contexts. These meanings can be specified and explicated in term of the social rule systems constituting and regulating each institutional domain. This is an implication of the *fundamental idea that modern social life is divided into different institutional domains constituted and regulated by different rule regimes each with its own values, norms, symbol systems, social relationships, etc., each a particular moral world* (Burns and Flam, 1987).

From such a perspective, it is apparent why not everything is commodified, subject to potential exchange and as a consequence, leading to monetary transactions. It is not acceptable in most modern societies to purchase court decisions, government policies, legislation, etc. Of course, some agents refuse to abide by such norms and institutional arrangements, breaching the barriers and regulations and undermining social order. There are then risks and dangers of corruption and illegal commodification (in the operation of black markets, for example, of forbidden goods and services). In this sense, values and rules of social life may define, structure, and constrain the uses and abuses of generalized money. People, organizations, and governments often restrict the liquidity of money, and create budgets or currency-

equivalents for designated transactions and transaction domains. Gift certificates, food stamps, coupons, domestic monies, gift monies, are all examples of specially created and regulated monies. Only when reductionist, rational-instrumental thinking has been allowed to override richer social sensibilities are such transfers equivalent to payment-in-exchange."

Zelizer (1994:24) drawing on Jean Lave's work, stresses that in families -- but it holds true for bureaucracies and other organizations as well (see later) -- members compartmentalize their funds into distinct accounts that reflect and support the social relationships and categories of activities into which people organize themselves." In this perspective, money is employed so as to enact and express as well as reproduce, social relationships, moral distinctions, and normative orders. Different institutional and organizational domains as well as networks of social relations -- each with its more or less particular system of rules and meanings -- introduce distinctions, restrictions, and control that mark the use of money assets, that particularize it.[5] Later we shall examine some of the ways that particularization and regulation of money income is related to institutional arrangements that embody and organize values in a value nexus and also transform values into one another.

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2. The Socio-politics of Money Particularization; The Maintenance of Boundaries and Social Structure

Money and money processes entail micro- as well as macro-politics. This concerns not only the activation of particular norms and social relationships in connection with money processes -- but also the defense of social orders that are threatened by the introduction of valuables such as money, or the commercialization of a domain.

Burns et al (1972) compared Melanesian communities that responded in substantially different ways to the influx of universalistic money (from Australia), where in one type of social order it could be exchanged for almost everything, including the traditional values on which the normative and social order was based, and in the other order such full convertibility was blocked. The evolution of the two types of societies was very different, as we argue below.

Shell monies are in widespread use in Melanesian societies. A "big man" is one who establishes and uses power over others to give him leverage on their production and the ability to siphon off excess products -- shell moneys as well as pigs, and vegetable foods (Burns et al, 1972; Sahlins, 1968). Big men employ money-like valuables, including shell money, as power tokens. Through particular strategies, the big men transforms turn economic imbalance into political inequality. This is most apparent in the case of the principal valuable: a type of shell money known as tabu. The valuable is limited in supply, storable, divisible into discrete interchangeable units, and, unlike many other Melanesian ceremonial valuables, is freely convertible into consumables (however in some cases, not into cash, see below). It is through the skilled use of tabu that political schemers achieve power and prestige. There is a variety of other valuables present, namely consumables like vegetables, fish, betel, and specialist skills in magic, dance, song composition, or carving, as well as capital equipment like canoes and such ceremonial goods as masks. It is difficult to acquire large stocks of tabu through providing such goods or services (Burns et al, 1972; Salisbury, 1966).

Big men gain prestige and power initially through the support of fellow clan members. Organizational ability and effort along with investments lead to increased personal wealth and the ability to mobilize and dispose of valuables worth several times what one owns oneself. This in turn leads to increased support, both in the intensity of loyalty and in the number of supporters. Furthermore, the big man seeks to

widen the base of support by increasing the number of domains over which he has control, e.g. song compositions, dances, capital equipment, etc.

In most Melanesian societies -- and this is a key point here -- shell money as well as other major valuables were not *freely convertible* either for other such valuables or for other goods and services. The classic cases in the literature (The Trobriands and Rossel Island) are of this type. Big men controlling shell money could build and maintain their power in part through sponsoring feasts and spectaculars, and also through a system of extensive loans, often though not exclusively to young men for bride payments. In such societies women were important valuables. Men aspiring to big-man status often acquired more wives than the average. This allowed them to increase vegetable and pig production for feasting. Among the Langalanga of the southeastern Solomons, it allowed for more extensive household division of labour, freeing some wives to work almost full-time on shell-money production. The general point here is that those who controlled the highest ranked valuables, here shell-money, also controlled access to other valuables and thus were able to extend and elaborate their social power in the society. But these accumulation processes were obviously constrained and regulated, above all in terms of limitations on convertibility.

The greater the number and strength of normative and social constraints (as a result of, for example, strong lineage systems) on a leader's or an aspiring leader's discretion and opportunities, the less his ability to extend his control over a range of valuables and to enhance his social power. Level of resource control and power makes a difference, however. Really big men -- who maintain their positions of power for long periods of time and have many supporters and access to and control over substantial material sources -- gain opportunities (and also motives) for circumvention of key norms. Under conditions of free competition, the established big men are able to outbid weaker ones for control over surplus valuables, leaving the weaker fewer as well as inferior qualities of valuables with which to seek to advance their positions. In this way, the powerful continue to accumulate followers, wealth, and resources, thus enhancing their position at the expense of weaker agents. Shell money, as suggested above, is a key factor in this.

The accumulation process is limited, however, by internal and external constraints: internally, by the unavailability of additional resources; externally, by the spheres of influence of other big men.[6] Finally, the big man's position is not an office with established authority rights, although it rests on well-established property rights regimes. Rather, it depends on a network of personalistic ties and is vulnerable to breaks in these ties or in economic transformations (see below). Death is also an obvious factor. A legitimating ideology of office holding of chieftainship or kingship would serve to constrain followers' freedom of action.

Although there are norms and constraints on convertibility between shell monies and other Western valuables, the introduction of Western or foreign currency (as well as other valuables) opens up new political opportunities and strategies -- which threatens established big man arrangements. The outcome of all of this depends largely on not only power but also normative factors, although cognitive factors also play an important role.

In those societies where big men tightly control the supply of scarce and highly valued goods, e.g. shell money and women, and restrict the penetration of cash, or maintain very high artificial rates of exchange, the traditional social structure is maintained and reproduced to a great extent. For example, the Tolai, one of the most advanced peoples, maintain their focal interest in <u>tabu</u> (Salisbury, 1970). They deal in cash every day, but refuse to exchange <u>tabu</u> for money. And yet <u>tabu</u> is used for everyday exchanges as well as for ceremonial payments. In other words, we find two forms of money, one of which cannot be exchanged for the other, but both are convertible into a number of consumables. Young men returning from employment

abroad or from nearby Western firms or government agencies would like to purchase tabu but are prevented from doing so. They can obtain it only through the traditional system of distribution and patronage of big men. In this way, the latter effectively maintain their power -- and reproduce many elements of the traditional social order -- by keeping the system of shell money accumulation and distribution intact while simultaneously accumulating cash and Western goods.

If controllers of new valuables such as Western money do not face such constraints, these valuables may sweep the field. Such a situation seems to have occurred in the New Guinea Highlands in the 1950's and later. Local business leaders in the area developed in the style of traditional big men. But these new leaders substituted cash for shells and engaged in modern business activity: coffee plantations, trade stores, truck ownership, etc rather than in the traditional production, exchange, and re-distribution activities of the big men. Their economic as well as "political" success typically depended on the partial support of kinsmen for labour and the pooling of capital. As organizers of visibly successful activities and manipulators of men, they gained prestige and further support. Followers supported these business leaders because they hoped to share in the prestige, gain valuable services, and obtain part of the profits. Moreover, the business leader's success was readily transferable into political power in the Australian-administered system at that time.

In Melanesian societies the interface -- and possibly shifting boundary -- between shell money and Western money entails a type of politics. In some cases there is contestation over boundaries of normative orders: more precisely, there is the question of the convertibility of Western money into traditional shell money. Key groups may try to limit the penetration of Western money into the social order; in other cases no substantial effort is made to stop penetration, or the efforts at restriction fail. Two distinct patterns of socio-economic development emerged in Melanesian societies (Burns et al, 1972):

- When non-convertibility is enforced, the traditional big-man nexus and social structure are maintained and reproduced to a large extent.
- With convertibility of Western money into shell money, the traditional order is eroded and eventually restructured, replaced by a type of money nexus and social structure based on differential control over or access to Western money.

In this respect, Braudel (1979:437) pointed out, "For the same process can be observed everywhere: any society based on an ancient structure which opens its doors to money sooner or later loses its acquired equilibria and liberates forces that can never afterwards be adequately controlled. The new form of interchange disturbs the old order, benefits a few privileged individuals and hurts everyone else. Every society has to turn over a new leaf under the impact."

In sum, the process of introducing "external or foreign monies" into Melanesian systems of power and authority point up the interplay of power factors, on the one hand, and normative regulation and constraint, on the other. New money flows open up opportunities for peripheral actors to improve their position and to challenge those whose power and authority is based on earlier resource conditions and flows. The money flows, the constraints and opportunities, the exercise of agency take place within a particular normative-institutional order. Powerful actors also may try to develop counter strategies to correct imbalances resulting from the introduction of "external and foreign monies". One of these strategies has been to restrict the penetration of foreign or new monies -- for example by not allowing the exchange of money for tabu.[7]

The question of particularizing versus universalizing processes with respect to money is, in part, a matter of politics and struggle. Historically, one can observe that

commodification -- the extension of the money-nexus -- clashes with the logic of maintaining particular traditional relationships and the moral order in a group, organization, or institutional domain. Zelizer (1994) in her important work draws our attention to the success stories, the cases where agents in a social institution such as the family effectively resist commodification, and maintain a substantive- or use-value nexus and social structure based on values commitments and related practices (Burns et al, 1985). But there are failures as well, cases where the money-nexus and commodification undermines social orders or transforms them into quite different orders, as the discussion here has suggested. For instance, the more that money becomes a "general equivalent," the exclusive expression of wealth and income in society, the more "instrumental rationality" and the increasing unidimensiolality of social exchange may be reinforced.

II. VALUE NEXUS AND VALUE TRANSFORMATION: PARTICULARIZATION AND UNIVERSALIZATION PROCESSES

The use of money as a "general equivalent" in transactions is a social fact, socially produced. The belief in the worth of a "monetary unit" is not determined only by a monetary authority or government, but, as we discuss later, is validated and reinforced through the beliefs and actions, judgments and discourses of a community of money users, or potential money users.

Because money is a general value or valuable that can be used to exchange with and to realize many other values, possession of money has a *generalized empowering capacity over time and space* (Dodd, 1994). Money provides, for instance, market purchasing power. It is also a basis for acquiring or obtaining prestige and status, as discussed in the preceding section. The value of money can be differentiated from substantive values -- particularistic values, use-values, moral values, etc -- which are grounded in concrete human needs, in collectively valued objects and artifacts, actions, and ideas. Some of these are commodified and have a price on a market. Other socially defined entities are explicitly de-commodified and denied access to markets: for example, laws, government policies, court decisions, body parts, sexual services, sperm, many drugs, and medical techniques as well as particular public services. If they are distributed at all, it is through non-market mechanisms (Burns and Flam, 1987).

Money, as a generalized medium of exchange, allows for the exchange, transfer, distribution, and redistribution of money value among different social worlds -- with different institutional arrangements, substantive values, and functions, e.g. the worlds of family, community, religious association, state agency, business enterprise, and numerous voluntary or non-government organizations. Markets, in particular, are institutional arrangements where the universal features of money are emphasized, and given their free play. Yet, buyers in markets typically participate as representatives or members of particular organizations which set off "earmarked monies" and, therefore, set limits on what transactions the representatives, as particular "buyers", may enter into, what they may purchase, how much money can be used, when purchases may, should, must be carried out, etc.

As suggested earlier, the particular systems of rules in each institutional domain provide, among other things, a basis to categorize and evaluate activities, and also to make meaningful budget distinctions in indexing money in the specific budgets or special monies associated with programs, projects, plans, and activities within the institutional domain. In all of this, the money allocation and earmarking processes give expression to and also contribute to realizing and reproducing valued patterns of interaction, social relationships and institutional arrangements, whether family, religious community, bureaucracy, government agency or enterprise. One key to understanding the logic of any given institutional domain are the particular value

transformations that are organized and carried out in the domain.[8] The following sections examine three major types of value transformation.

1. Particularization Transform (I).
The universal exchange-value of money value M is transformed into concrete activities, programs, and projects that embody or express institutionalized use- or substantive-values -- within the institutional context, whether family, government welfare agency, religious organization, or business enterprise. Symbolically: M [Money or exchange value] ---> T_I [Social Organization: categorization, allocation and realization processes] ---> V_i [Use-value embodied in particular institutionalized activities, projects, and programs]. Through allocation to or investment in particular budgets or accounts, a uniform, coherent value of money is transformed into institutionally particular substantive- or use-values.

In a family, for instance, some accounts or budgets relate to everyday living expenses and would be distinct from pension funds, an education account for the children, purchase of a summer cottage, acquisition of art, etc. (Zelizer, 1994). Similarly, in a bureaucratic agency, particular, possibly legally binding, distinctions are made between operating expenses and an investment fund for a new facility or new equipment. In other words, the operating expenses are earmarked according to the institutionalized programs, projects, and activities of the bureaucratic agency and are intended to realize particular laws, policies, etc, that are expressions of the institutionalized values and goals of the organization.

Generally speaking, money assets in an overall or total budget are allocated or divided up into budgets or accounts associated with particular activities, programs, projects, and plans in any given relational or institutional context.[9] *The universal exchange value of monies* is transformed by the indexing or earmarking of money assets into particularized monies or budgets associated with substantive-values, with social and even sacred markers. Even more dramatic transformation is the purification or "laundering" of profane money into sacred budgets, applications and uses (Zelizer, 1994:22). The general pattern is one where Type I value transformations are organized and operated in ways that reflect and realize the normative order of the institution, whether the institution is a family, religious association, government agency, or business enterprise. Any such realization processes entail "investing value(s)" through concrete efforts and programs. Realization is not unproblematic: essential transformations may fail to be carried out effectively, or they may be carried out in distorted and self-defeating ways.

2. Commodification Transform (II).
Here particular valuables -- land, consumer goods, tools and technology, services or labor -- which have substantive- or use-values are transformed into money assets through market processes. [10] For example, employees or workers exchange their labor or labor potential for money income. The income gained is the basis for them to realize particular values and projects within families, communities, networks, and other associations. Market processes transforming use-valuables into exchange values can be symbolically represented as follows: V_i [Particular substantive- or use-values embodied in labor, techniques, tools, land, etc.] ---> T_{II} [market processes] ---> M [money or exchange-value]. The money income gained can then be used by individuals, groups, organizations, institutional domains, to purchase meaningful goods and services for themselves, thus again transforming exchange-value into use-value as one mode of particularization (Transform I). One of the basic functions and achievements of markets is to enable or facilitate multiple value transformations.

Money based transactions enable the exchange and transformation of different values into one another, across markets, domains and segments of modern

society. This points up the generalized empowering capacity of money -- its value as a power resource. *These multiple transformations are a basic integrating mechanism in a complex, modern society* (cf. Dodd, 1994), precisely because money facilitates linkages between different value domains, activities, and groups in a differentiated society (see later).

3. Capital Multiplier Transform (III)

Money assets M are translated into concrete enterprises, programs, and projects (that may entail intrinsic values), which in turn are intended to result in money gains (profits). Symbolically: M ---> T_{III} [Organization and operation of "production" and exchange processes] ---> M+. This represents the basic logic of a capitalist enterprise, where the driving value underlying the transformation is precisely "making money" or realizing profit. Of course, the products, activities, programs may have intrinsic value to many of those employed in the enterprise at the same time that the money-making or money-transforming processes per se may be only of marginal interest to them (or even largely outside of their awareness).

The capitalist enterprise -- typically in ways more rational and systematic than a family, government agency, or voluntary organization -- takes a budget of generalized money and translates or transforms it into particular indexed monies (budgets or accounts) in order to ultimately realize particular money-making plans, projects, programs, and strategies. The use-values of enterprise projects and programs are means, not ends. The value transformation- and realization-logic of the business enterprise is obviously different from that of non-business organizations (there are interesting hybrid organizations that combine both, such as family firms and money-oriented religious organizations).[11]

In sum, the conceptual analysis outlined here identifies several key value transformations of, for instance, exchange-values into substantive- or use-value budgets, and ultimately into particular activities and projects that realize institutionalized values. Each institution -- enacted in defined areas of activity -- gives expression to and organizes the realization and transformation of specific values. These together with their expression in programs, projects, and activities give the institution its identity and underlie the logic of its value transformations and value realizations.

III. INSTITUTIONAL ALCHEMY: SOCIETAL AND INSTITUTIONAL PROCESSES IN THE SOCIAL CONSTRUCTION OF MONEY

In the creation of fiat money, an authority, central bank or government office defines or designates some material "X" as money with a particular face-value or worth $. Worthless pieces of paper are transformed into valuable money assets through such an institutional alchemy. But the initial designation process, the definition of fiat money, is only the beginning of a complex societal process, the construction of the social and institutional facts of money (Searle, 1995). What is critical are the social controls and self-fulfilling processes that make a definition or designation binding and stabilize it.

Various legal and other social controls contribute to structuring and regulating social interactions so as to reinforce acceptance and adherence to the definition, that is, to make or maintain a *binding definition of the situation*. A modern state's police and judicial powers strengthens its ability to impose fiat money -- for instance, by requiring people to accept it as payment in exchange transactions. Equally important is the establishment and reinforcement of a collective trust or belief in the money's worth and collective confidence in the system creating and regulating money, as we discuss later.

1. The Institutional Perspective on the Social Construction of Money

Assume an object or material X has intrinsic value in a community, for example, shells, cattle, or particular metals. The participants in the community recognize X as valuable, and use -- or may use -- X as a medium of exchange, that is as ”money”. X also can function as a storage of value, or as a means of mobilizing resources for particular projects, initiatives, investments, and developments.

In order to function as money, "X" need have no intrinsic value. It may consist of pieces of paper or more or less worthless metals; particular marks in a ledger or on a magnetic tape or in the memory of a computer. An authority A makes the determination that X is to function as money M with unit value $. Such "fiat money" is typical of modern monies. Agents assess and react to these pronouncements. Emergent reactions -- organic, spontaneous, etc -- make for a type of validation (or invalidation, as the case may be). Their behavior adheres to, "conforms" with, or deviates from the definitions and determinations of the authority A. X functions as money in fact insofar as people in a population believe in -- and act according to -- this institutional determination. Such belief and practice rest in part on a stable definition or conception of reality, namely that A has the authority and power to back up and maintain the institutional fact that "X" is M having a unit value of $. This depends on types of "self-fulfilling processes" (see later). It also depends to a considerable degree on the exercise of power and authority. In particular, the authority A has the capacity -- or appears to have the capacity -- to mobilize the resources, material or symbolic, to "back up" M. This may mean a readiness to exchange for M more basic or trustworthy valuables such as gold, silver, or physical property; or another currency in which most people trust. But, even in the absence of such convertibility, people are inclined to believe the social fact because others believe it and act on this belief (convergent mimetic behavior) – at least, as long as there is no apparent reason to doubt it (the factor of "habit" also plays a role (Dodd, 1995)). A typical social control mechanism for sustaining such mimetic behavior involves experts making pronouncements that are intended to persuade people that no risk is involved in holding the money assets. *Faith, trust, and shared belief are essential cornerstones of money systems*. Later we shall examine how collective belief and trust are vulnerable in particular ways to erosion or collapse, so that money and banking systems fail. We also examine ways in which institutionalized strategies and arrangements may operate to maintain trust in a monetary order (discussed more fully in Section IV).

The social acceptance of money entails multiple processes of "validation" and maintenance of conditions or trust or belief so that a particular social definition holds. In general, a key to the construction of an institutional fact like money -- the making of stable, binding definitions of the situation -- are *multiple social control and power processes* (cf. Searle, 1995). Of course, an authority's ability to get people to accept fiat money is strengthened by the policies and judicial powers of a modern state. Black markets may arise, of course, as enterprises and individuals avoid the use of the currency (contrary to legal requirements) or illegally exchange the domestic currency for other, more trustworthy currencies. Such actions contribute to or validate a collective belief that the money is of uncertain or risky value. This loss of confidence or trust in the currency further motivates people to avoid it and to trade and store value in other specie or liquid valuables. Moreover, a growing refusal to accept the domestic currency means that the state loses some of its clout in extracting segniorage -- in particular printing money that can be used to finance its operations; quite simply, enterprises and individuals may refuse to accept it, or bargain to avoid taking it.

In sum, the social construction of money depends on and is a manifestation of an underlying social structure and related normative and control processes. In the following discussion and also Section IV, we specify and discuss some of the ways in which institutional arrangements and organic societal processes operate to establish and maintain a binding definition of reality -- or, alternatively, how when that which has been intended as a binding definition of reality, particular institutional facts, are disrupted, eroded, unraveled there is a breakdown of the order (Burns and Dietz, 1997).

2. Validation of Value Through Market and Market-Like Processes

In the case of most modern monies ("fiat money"), the "status of money" is determined through two distinct interrelated processes:[12]

- *authoritative/administrative process*, that is an authority designates or decides on a value (e.g. exchange rate).

-*organic societal process*, where populations of agents "vote" with their actions, manifesting their confidence or lack of confidence -- in the value of a currency and in the monetary order as a whole.

Both of these processes operate and interact in the construction of modern money systems and in the functioning of monetary orders. They operate often in contradictory ways, in that the institutional authority tries to legislate X as money with face-value $. But economic agents reject this, or they react contrarily -- denying this definition in their judgments, communications and actions, for instance refusing to use or hold the "money". The key to a robust money system is the complex of social mechanisms whereby collective beliefs and trust are generated and maintained.

An organic process of assessment and judgment of the worth of money occurs through actual transactions where monies are exchanged (one currency for another, or money for specie). Particular institutional arrangements organize and coordinate negotiations and exchanges in markets. Through such organized processes, "prices" and price variation (as well as volume of trade) are generated.[13] Such an approach to markets -- more precisely the conceptualization of the social organization and interaction processes of markets -- takes as a basic methodological principle that the beliefs of agents and the market organizing principles and rules (the particular institutional arrangements) must be taken into account in order to understand the generation and dynamics of money processes and monetary orders. The liquidity or money preferences underlying the "supply and demand" of money are not exogenous, but are generated within the political economic system, for instance, through processes of trust-formation or trust-degeneration, a matter to which we turn in later sections.[14] Belief or trust in a monetary order is indeed vulnerable -- it must be structured and regulated in particular ways if people are to sustain trust in it and it is to function effectively.

3. Public Trust as a Constitutive Factor in Stable, Robust Money and Banking Systems

Particular "social facts" -- institutionalized or binding definitions of reality -- are for our purposes here such things as: the banking system as robust and dependable; any given

bank as trustworthy and reliable; the existence of a robust security net in case of a bank crash, or banking system failure; bank regulation as systematic, comprehensive, and effective; "real money" as pieces of papers or memory traces in a computer. The institutionalization of particular definitions of reality -- which together with a rule regime or normative order -- is the basis on which actors in a given domain collectively constitute and regulate their activities. Through their actions and interactions, they generate particular patterns (practices) and developments. Participants' beliefs, orientations, framings, and strategies play a major role in the functioning of institutions such as monetary orders. In short, their beliefs and values as well as interpretations make a difference in the functioning of the money system.[15]

A binding or institutionalized definition of the situation, like a norm, operates as a social fact to which actors orient and take into account in framing the situation, making judgments, and acting and interacting. It depends on the complicity of actors participating in -- or potentially prepared to participate in -- money processes. If they reject the definition, or simply become distrustful or skeptical, this will lead to changes in their orientations, judgments, and strategies such that the social fact is threatened or undermined -- possibly setting the stage for a new reality with new social facts. The basis for institutionalized or binding definitions of reality is usually not solid evidence or intimate knowledge or information about the "mysteries" of a money order, the banking system's functioning, its regulation, or the behavior of the banks. These remain in large part obscure, if not mysterious for most people (Braudel, 1979:436). In general, it is beyond most people's capabilities to know or to obtain sufficient information about these systems or their components. Rather, they act on the basis of trust or shared confidence in the order, or its components, for example:[16] (i) Trust in the monetary signs themselves (the printing on currency or the magnetic states in electronic systems will not fade away or suddenly disappear): (ii) Trust in the monetary order and its key agents (iii) Trust in one bank or in another. (iv) Trust of the general public or bank customers in any given bank.

Such belief is typically not supported by evidence actually known by the believers (however, trust in the sense that we use it here can be distinguished from unquestioning faith or acceptance). [17] Trust implies then a belief in the reliability -- and predictability -- of the institution's or order's functioning and performance. Such trust is a major constitutive component of social order, and, therefore partly self-validating. The role of collective belief in stabilizing or destabilizing social order -- in particular banks and banking systems, was pointed out by Merton (1957;1968) in his article on *self-fulfilling prophesies*. The shared belief among bank depositors in the liquidity of the bank -- and the security of their deposits, or in the stability of the currency -- were strategic factors contributing to a particular order entailing social facts such as deposits, bank liquidity, stable currency, etc. The beliefs contribute, through their framing of and influence on action, to the validation of the beliefs. Thus, public trust in the stability of a currency -- in its value and its liquidity for making payments -- contributes to sustaining the overall system.

In his analysis of the phenomenon of self-fulfilling prophecy, Merton (1936, 1968) assumed that statements about future social situations are simply 'true' or 'false', *independent of the beliefs* that actors hold (Krishna, 1971).[18] However, the statements -- or beliefs on which they are based -- may or may not correspond to conditions or developments in social reality. Merton writes (1968:421): "The self-fulfilling prophecy is, in the beginning a false definition of the situation evoking a new behavior which makes the originally false definition come true."

Merton refers to the bankruptcy of a major US bank in 1932 (many banks were forced to close their doors in this period). This closure was precipitated by rumors that the bank was in the process of going bankrupt. Depositors rushed to remove their money before the bank collapsed. As a result of their run on the bank, it indeed failed.[19]

Customer "deposits" became worthless or of highly uncertain value. According to Merton (1968:422): "The stable financial structure of the bank had depended upon one set of definitions of the situation: belief in the validity of the interlocking system of economic promises men live by. Once depositors had defined the situation otherwise, once they questioned the possibility of having these promises fulfilled, the consequences of this unreal definition were real enough."

The shared belief among depositors in the liquidity of the bank -- its capacity to pay depositors their claims and to assure the security of their deposits -- is a strategic, constitutive factor in generating or constructing the social fact of the effective liquidity of the bank.[20] In other words, the liquidity is validated in part by the belief itself! The belief enters into actions, judgments and conditions, and influences potentialities, events, and developments in the situation, above all the viability of the bank, since a bank by lending out money is typically in a state where it is incapable of collecting all of its loans and returning on short notice all of the deposits to its clients. One cannot, therefore, speak of 'true' or 'false' or 'real' or 'unreal', at least in the sense of statements made independent of the situation referred to, when these statements (and the underlying beliefs) enter into actions and interaction and maintain or undermine a social definition of the situation. One should refer instead to *potentialities*, possibilities, or opportunities, which agents may exploit.

The contrary belief -- that the bank could not meet its obligations -- was of course a threat to the liquidity of the bank and, thus, a threat to its capacity to pay depositors on demand, particularly in the case where substantial numbers of depositors or potential depositors -- came to hold this belief. When such a belief spread to a substantial number of people who acted on the belief, the liquidity of the bank was, indeed, undermined. The rumor -- and the spreading belief -- that the bank might fail to meet the claims of its depositors were not invalid, contrary to Merton's argument. Certainly such a belief was potentially valid where there are real possibilities for the bank failing to meet its obligations. Under circumstances of widespread diffusion among bank depositors of the belief about pending bank illiquidity, the belief was and became, indeed, a valid one. This conception of a self-fulfilling or self-defeating prophecy differs substantially from that of Merton.

A shared belief or public trust in the liquidity of a bank -- in its capability to pay all its depositors their claims on demand -- contributes to sustaining a bank, even a bank having serious liquidity problems. The public trust is a major constitutive component of the socially defined and organized order. The bank is viable as long as the shared belief -- public trust -- is maintained and other events and circumstances do not undermine such trust in the bank's status. An undermining factor would be that other banks, or the Central Bank, refuse -- or possibly only hesitate -- to express trust or to show confidence toward the bank. Or they fail to take stabilizing measures vis-à-vis the bank. The importance of credible expectations about the behavior of the lender of last resort, the Central Bank, is crucial.

Obviously, public trust is not sufficient to assure liquidity. Other factors, such as the claims of other banks, the need to satisfy the regulations and controls of the central bank, the size of the bank’s reserves, its ratio of outstanding loan/reserves and so forth play a role in establishing or undermining the social fact (for instance, the reputation) of the viability of the bank.

Solid collective trust in the bank's viability might not, however, be absolutely valid in the institutional and socio- economic context at that time, for any such belief might have failed to recognize or to take into account the potential vulnerability of the bank or the volatility of the situation. In particular, it might not take into account the importance of the shared but vulnerable belief among depositors in the bank's viability and, indeed, the potential instability of the belief itself.

Thus, contrary to Merton, a rumor -- and spreading belief -- among depositors that the bank might not meet its obligations is not invalid *per se*.[21] Indeed, belief in a bank's liquidity would be vulnerable to invalidation under precisely those conditions which facilitate or reinforce the spread of the ”contrary belief” of weak liquidity and 'bank panic', in a word distrust. A potentially more ”realistic” belief would take into account the inherent vulnerability of the bank's situation and the clear and present danger of illiquidity developing, as a function of growing loss of confidence or distrust in the bank, or in the banking system as a whole. While our discussion here has focused on depositors, it applies as well to creditors or potential creditors. The bank's liquidity image or reputation on the financial markets is critical for its continued access to capital markets. A depository institution awash with liquidity typically has little difficulty raising even more liquidity. But potential creditors are more likely to avoid depositing in a weak or vulnerable bank; or they demand higher than average interest rates from a bank experiencing liquidity problems (indeed, this may set the stage for a vicious circle of vulnerability -- declining trust -- greater vulnerability, increased liquidity problems, possibly ending in collapse).

Consider, for example, what a shift from a banking system in which all or most trust or believe in the liquidity of the system and the security of their accounts, to a system where serious distrust of liquidity emerges. If account-holders act on their doubts, "running" on their banks, they precipitate a banking crisis. The system is transformed from one structure of beliefs and patterned interaction -- on which trust has been based -- to another structure -- which is both the result of a loss of trust but also evidence or verification of significant distrust. In such a process, statements about future reality contribute to or set in motion certain strategic actions, thereby transforming the state of the system. Thus, prophesies about bank illiquidity may precipitate the crisis, and are potentially self-fulfilling. Such re-construction implies a major reorientation of organizing principles, rules, strategies, and system-knowledge for key groups of actors involved: owners of capital, enterprise managements, other banks, government agencies, and labor unions, among others. New frameworks for description, judgment, and action come to be established.[22]

In section IV, we consider a variety of institutional arrangements, mechanisms, and agents that operate to produce, maintain, and reinforce trust in the proper and effective functioning or performance of the money order, its agents, and its money technology; also of interest are strategies utilized to deal with or to minimize movements of distrust or destabilization of the order, or any of its key components. This is the basis for the establishment and stabilization of institutionalized definitions of reality -- social facts -- relating to monetary orders, or, indeed, any social order.

IV. THE SOCIO-ECONOMICS OF MONEY AND MONEY SYSTEMS: BANKING SYSTEM FAILURE

This section examines problems in establishing and maintaining monetary order. The focus is on historical innovations and failures, the concrete structuring and regulation of money and money systems (Baumgartner et al, 1996; Burns et al, 1985; DeVille and Burns, 1976). Nation states work to establish single national currencies (the case of the USA is examined below). While a private banking network may administer and enjoy enough clout to maintain a relatively stable and effective monetary order, typically there has been a shift from private initiative to public responsibility -- the establishment of a state-territory-money nexus. Moreover, there has been -- and continues to be -- an evolution of the institutional strategies and means to operate money systems (for a general treatment of evolutionary processes with human agency, see Burns and Dietz (1992a)). Changes in the system itself -- and the problems this generates -- are the focus in an examination of the evolution of the US banking system (see below). A basic

principle here is that what worked earlier, more or less effectively, tends to fail over time, in part because of unanticipated consequences of the regulative processes themselves and in part because of changes in and development of monetary systems.

1. **Banking and Money Regimes in a Historical Perspective: Money, Social Power, and Social Structure** (DeVille and Burns, 1976; also see Burns, DeVille, and Flam, 1987)

In earlier work we addressed the development of money and money institutions that constitute and regulate key monetary processes and problems. Examples of such developments are the creation of central banks and monetary policies, fiscal policies, labor legislation, and regulatory agencies. DeVille and Burns (1976) viewed capitalist crises and regulatory responses as multi-dimensional and multiple level social phenomena, entailing contradictory socio-economic and political processes. A key contradictory feature of the role of money in capitalism is that, on the one hand, it is used as a medium of exchange and, on the other hand, being an asset, it is used as a source of funds for investment, for capital expansion, and for accumulation, but it also allows for speculation. These uses or functions are not "naturally consistent" and systems of monetary regulation do not then operate unproblematically. Quite the contrary, our analyses suggest the profound problems of regulating complex money systems. As the case of any institution, multiple, often contradictory demands are made on such systems.

Money as a medium of exchange is an element present within any commodity-production system. It is the common "language", the "socially accepted signs" that make such exchange possible. But, as the structure of the exchange system becomes more complex, with the emergence of intermediaries (e.g. trade merchants), a differentiation is created between the sphere of production and the sphere of exchange. The emergence of "merchant capital" is the economic manifestation of functional (as well as power) relationships existing between producers and intermediaries. Actors come to discover or recognize another characteristic of money, namely its storage of value (and of social power). Money holdings become assets. Merchants can use their accumulated monetary wealth and power not only to launch new money-making projects but to restructure exchange and market relationships -- and possibly even relationships of political power that can be exploited, in turn, to restructure money and other socio-economic institutional arrangements (Burns et al, 1985; Burns, 1995).

The contradictory nature of the role of money in the capitalist system (cf. Marx, 1973:203-207) is a major source of instability and the erosion of monetary systems. In order to adequately perform its function as a medium of exchange, monetary signs have to be based on a social consensus about its stability as a measure of value (as discussed in section III). But such stability is constantly threatened by the use of monetary signs for speculative purposes since they can also be used as source funds for capitalist investment, development, and further accumulation. This persistent (and enduring) contradiction between the uses or functions of money is pointed up again and again in the historical analysis of the evolution of the banking system and the related crises in the USA (DeVille and Burns, 1976; Friedman and Schwartz, 1963:240).

Before 1860, apart from a few attempts at regulation which never endured, the US banking system and the money market could be described as completely unregulated. A national currency did not actually exist. This resulted in a highly complicated system of clearing houses dealing with almost 10,000 different currencies which were for the essentially private bank notes! With increased industrialization and the ever-growing interstate commerce, such a situation could not persist. This was not only because it was cumbersome but also because it was highly unstable'. Indeed, the value of all the private bank notes *depended on the estimated probability of converting*

the notes into a given amount of specie (gold or silver). Such probability was itself obviously a function of the amount of reserves in specie that each bank was holding. But in the absence of any restrictions on credit expansion, banks (especially small county banks, the "wildcats") over- committed themselves in lending money. Defaults were frequent, resulting in recurrent panics and banking crises. Particular monies became worthless. The issuing banks collapsed, often followed by other banks in networks of interdependent banking ties. At this stage money was clearly failing to fulfill two of its major functions.

The first institutional response to such a state of affairs was the *National Banking Act of 1863*. It dealt with the problem in two ways. First it established a national currency by imposing a uniform set of rules for all federally chartered banks. Moreover, the principle was established that all notes issued from a national federally chartered bank were redeemable at par with any other national banknotes and of course with U.S. government currency (the system was entirely fiduciary). Convertibility into specie for national bank notes was suspended from 1863 to 1879 as a result of the tremendous money creation that took place in the North to help finance the Civil War and Reconstruction. (The U.S. government currency was the successor of the famous "greenbacks" of the civil war).

The first measure for restricting and controlling the credit expansion process was taken by imposing fixed minimum reserve requirements (reserves here included U.S. currency plus some deposits made in other national banks, especially in New York). In dealing successfully with the problems, risks, and malfunctioning related to multiple currencies and the "wildcat bank" problem, the National Banking Act -- as an institutional innovation -- achieved a number of the main objectives of its designers: establishment of a more organized capital market and a sharp expansion of the banking system (by 1871, approximately 60% of all deposits were in the National Banks network (Friedman and Schwartz, 1963:15). The system facilitated interstate exchanges and the organization of stable links between local or country banks and the more important "city" national banks. The National Banking Act was also linked to the emergence at the end of the American Civil War of a potentially powerful social group: The East Coast financial class. One particular but crucial feature of the institutional structuring and regulation implied by the Act was that local or country banks, essentially linked to the agricultural sector, were allowed to deposit their legal reserves in national banks. They clearly utilized this opportunity, since city banks, especially in New York, were able to pay much higher interest rates on short-term deposits because of the demand for such deposits to finance bond market and stock market transactions. And this was, of course, an intent of the Act: to create a strong tendency for reserve centralization. The financial centers became New York, Boston, and to a lesser extent Philadelphia. They formed a center in relation to the periphery -- the multitude of smaller, less strategically located country banks. This restructuring of the financial market set the stage for the rapid capital mobilization and capital accumulation that took place during the following two decades (Friedman and Schwartz, 1963:7,35). This rapid economic development was accompanied by a parallel uneven development of the banking system. It generated new conflicts between local banks and the large, eastern city banks (an unintended consequence of the restructuring of the system).

Increases in the demand for cash balances in local banks were highly dependent upon the specific conditions of agricultural production and thus could occur at times when the demand for lendable funds was very high in cities. In such instances, credit stringency could reach disastrous proportions with consequent stock market panics. These panics contributed to overall or *global instability* since local banks, irrespective of their own demand for cash balances, began to withdraw their deposits from city banks at the first sign of crisis. Such a move was understandable, of course, since in periods of crisis, city banks usually tried to restrict the convertibility of deposits

into currency. The inescapable consequence was not only to create a number of bank defaults (a financial crisis) but also to spread the crisis to industry and commerce by forcing into bankruptcy enterprises unable to meet their financial obligations.[23] And, indeed, such banking crises, which took place in 1873, 1884, 1893, 1903, and 1907, were accompanied by sometimes mild but nevertheless real recessions.

After the 1907 crisis, the most severe of all, the necessity for a major institutional change was widely recognized, leading to *The Federal Reserve Act* of 1914. The title of the Act read as follows: An Act to provide for the establishment of Federal reserve banks, *to furnish an elastic currency, to afford means of rediscounting commercial paper, to establish a more effective supervision of banking in the United States, and for other purposes*." (emphasis added). This reveals in part what the problem was believed to be and consequently what were the objectives of the new institutional arrangement and regulatory process. The perceived problem concerned *inelasticity*: that is, the inability of the banking system to create additional means of payment when a critical shortage of liquidity threatened the effective functioning of the financial market and, consequently, the harmonious expansion of industrial production. *The objective was thus to create an institution that could function as a lender of last resort*. This was achieved in two ways: first, the creation of the Federal Reserve Note to replace all the old currencies in circulation and to control its issuance by a single but decentralized institution: The Federal Reserve System. Second, Federal Reserve Banks could, if needed, rediscount commercial paper and make open-market purchases of government securities to inject new Federal Reserve currency into the system (Flexible Reserve Requirements were introduced only in 1935, that is, after the Crash of 1929 and the Great Depression).

The perception of the problem and the design of the regulatory mechanism focused on a flexible currency supply. And it is apparent that such a "technical-neutral" solution was satisfactory for all the major agents involved. The ability to inject cash reserves when necessary and thus to prevent bank failures was satisfactory for small depositors and small banks concerned with the security and stability of their deposits. It was also satisfactory for the large financial institutions since, by allowing rediscounting, it preserved the stability of financial markets in the face of fluctuations in the relative demand for credit.[24]

While solving a number of problems, a major new risk, a potential source of great instability and conflict was introduced -- although not intentionally -- as time would show: The Act set no limit to the stock of money and thus no restriction on credit expansion other than the one imposed by the Federal Reserve Board through its now almost complete control over the stock of money.[25] Also important to keep in mind is that the policies of the Federal Reserve System, and in particular the Federal Reserve Board, were quite strongly influenced by the large banking institutions of the East.[26] The System -- in the context of a dynamic, expansive, powerful capitalism and Eastern banking system -- tended to give priority to credit expansion.[27]

The period from 1921 through 1929 was characterized by stable but rapid economic growth. To quote Friedman and Schwartz (1963:240): "As the decade wore on, the System took -- and perhaps even more was given -- credit for the generally stable conditions that prevailed and high hopes were placed in the potency and monetary policy as then administered." The real test of the Federal Reserve System as a stabilizing device was still to come. It was to be, of course, the stock market crash of 1929 and the entire period of the Great Depression up to 1936. A detailed consideration of this history is not essential for our purposes. But to analyze the potentially transformative character of the Federal Reserve arrangements, we shall consider two specific, but crucially important policy decisions made by the System policymakers during that period. In selecting these two decisions, we hope to point out a few key features of the Federal Reserve System: (1) it was unable to deal effectively with the

new emerging problems that resulted from the *contradictory role of money* (pointed out earlier); (2) it allowed the new emerging problems (and dysfunctionalities) to develop into a crisis; and, indeed, through its own actions it worsened the crisis. Over the long run, it changed the "dimensionality" of the problem, in part by changing the perceptions and value orientations of the actors involved (DeVille and Burns, 1976).

Many economists have wondered how to explain that, in the midst of the Great Depression, the Federal Reserve System actually *raised* the discount rate in 1931, increased the reserve requirements imposed on member banks in 1936, and generally throughout the period let the money stock steadily decline![28] Both measures tended to clearly aggravate the recession as many economists, as different as Friedman and Marglin, agree (Friedman and Schwartz, 1963:694, 698; Marglin, 1975:10; see also Gordon, 1974:72). Why was monetary policy so inept? [29]

To understand this, let us recall that the National Banking Act of 1863 and the Federal Reserve Act of 1914 became the institutional cornerstones of a regulative process: to establish institutional controls between essentially suppliers of cash balances (reflected initially in the importance of local, small banks) and credit institutions. Such *relational control* (Burns et al, 1985; DeVille and Burns, 1976) tended to further strengthen the domination of the credit institutions such as the large eastern city banks over the system. This manifested itself in the steady increase in reserve centralization. It also explains why the Federal Reserve Act, by making the stock of money a 'regulative or control variable' was no longer setting any automatic self-determining limit to its increase and, therefore, to the expansion of credit. And this is exactly what happened when the stock market boom began to develop dramatically in 1927. The Federal Reserve Board was faced with a major dilemma or predicament: either to stop credit expansion and break the bull stock market but also stop economic growth, or risk the opposite. It did not choose definitely either of these two policies. From Spring, 1927, until the Crash in, October, 1929, it tried desperately to maintain a middle way which failed to achieve either of the two objectives. In this way, the problem developed into a crisis.

When the stock market crash occurred, the first reaction of the managers of the Federal System was to protect the banking system through rediscounting. But such expansion of Federal Reserve credit was not sufficient in the context of a massive crash to slow down the continuous decline in the stock of money. This led to the worst shortage of liquidity ever experienced. The shortage of liquidity resulted in waves of bank failures, which culminated in the famous "banking holiday" of 1933. The entire process had been exacerbated by the restrictive monetary actions taken by the Federal Reserve Board, as mentioned earlier. Why was such action taken? Not out of irrationality, or incompetence. But because the Federal Reserve managers still concerned themselves with the stability of the currency, and particularly its external stability, even in the face of a banking collapse. From the start of 1931, in the face of low interest rates within the U.S., a substantial amount of monetary gold flowed out of the country and required an increase in the discount rate to stop this flow.[30] The demand that the value of currency be stabilized explains the Federal Reserve Board's decision to increase reserve requirements in 1936! Such increase was the result of the constant fear that any expansionary monetary policy would create inflation. The policy contributed to bringing about the sharp recession of 1937 and 1938. In a certain sense, the Federal Reserve managers produced an "amplification effect" through its own actions.

In sum, regulative institutional arrangements may stabilize a system and thus allow, at least temporarily, for its expansion. But it also increases the potential -- the dangers and risks of other failures (see DeVille and Burns (1976) for a discussion of such dangers and risks). [31] The stage is set for future major failure or collapse of the banking system.

2. **Regulating and Stabilizing Money Systems as Complex, Large-scale Socio-technical Systems**

Money and money systems are, in part, constructed and managed through normative as well as political regulation, as suggested earlier: for instance, in the case of Melanesian shell money systems; entrepreneurial regulation in the USA (that is, private banks establish and print their own money as in the early development of the American banking system); and public regulation in the USA through the creation and development of the Federal Reserve System. The reliability and stability of money and the monetary order are key concerns of monetary authorities, banks, and economic agents as well as the general public. Distrust can arise quickly and loss of confidence in the system spread rapidly, threatening the system as a whole. This is, in part, a case of self-fulfilling beliefs (where beliefs, and shifts of beliefs are part of the processes of change, destabilization as well as stabilization).

In their efforts to effectively regulate a monetary order, policymakers and managers develop a rough model of the system and a set of tools with which to try to steer and control the system. There are cognitive and epistemological problems as well as operative problems with such regulation. Several of the major problems, risks, and dangers relating to money and money systems which regulators try to identify and deal with through particular institutional arrangements and policies are the following:
(1) *Counterfeiting and debasing*. Some economic agents may create non-legal or even illegal monies and make use of such monies in their transactions (in some cases, these may become recognized currencies and a type of "black market" arises. Even in gold systems, royal monarchs were not disinclined to debase the coinage in order to cover rising expenditures (which could not be covered by taxes or increasing taxation). The extraction of additional seigniorage has not been an uncommon practice, exploited by kings and other makers of money, based on the difference between the value of the bullion used and the face value of the coin.

With modern forms of paper money (or legal paper), the cost or value of the paper is negligible, while the face or nominal value is determined by the authority. Hence, the authority or a network of banks can create money -- in part in response to demand -- in order to resolve income struggles and conflict over the distribution of income (including the state's problems of financing its projects, including wars, when the possibilities of financing through taxation are insufficient) (Baumgartner and Burns, 1980; Baumgartner et al, 1984, 1986; Burns et al, 1987). Of course, the power of the authority to determine value relates to the institutional setup and regulation of the money-system, and the extent to which people can trust in the system.
(2) *Money assets* cannot always be effectively stored; there is the risk of theft, of tampering with the ledgers, easy access to electronic accounts, failure of an electronic money system, or its computers and backup, etc.
(3) *Bank crashes or crash of the monetary system*. There is a loss of confidence in particular banks or in the monetary system as a whole, as discussed earlier. This may or may not raise doubts about the currency as such.
(4) *Loss of domestic confidence* in the currency and/or in the monetary authority. This may occur because experts make statements to this effect, and set in motion self-fulfilling prophesies, for example "bank runs" and crashes, when people no longer trust in a system, either particular banks or the system as a whole (e.g., its currency) (whether or not their distrust is well-grounded) and where they perceive the risk of losing substantial sums of monetary wealth. Or it may occur through everyday experiences, and organic processes of communication, and diffusion of representations and strategies: people experience the currency as losing value. People may "vote" with their accounts, removing money from banks, exchanging the currency for gold, or for what they consider more reliable or robust currencies.

(5) *Loss of confidence among foreign agents* who consequently refuse to hold or accept the currency (resulting in currency depreciation or in devalution). Such loss of confidence may not be shared by the public, or its key economic agents, within a given society. But depreciation -- or even the threat of major depreciation -- may motivate many of them to remove deposits or savings accounts in the domestic currency in favor of more reliable currencies.

Any of a number of particular events or developments may result in growing distrust and actions which erode institutional definitions of reality, that is key "social facts" of the monetary order. For instance,[32]

(i) "objective data" may indicate problems, e.g. a report on the liquidity of the bank or disappearance of large sums of money; or the collapse of similar banks.

(ii)others express or exhibit distrust, e.g. withdrawing money, or exchanging the domestic currency for other currencies or for gold.

(iii) changing conditions or contextual developments that some "experts" interpret as threatening or making for a precarious situation for banks.

(iv) behavior of the authorities or managers which indicate serious problems or risk of failure. Particularly critical is a situation where strategic institutions or their representatives or other elites behave in a distrustful way.

(v) generalized distrust or suspicion of institutions, in particular the banking order.

Thus, loss of confidence or distrust may arise in a number of ways and for a variety of reasons. It may be general, or it may be focused on particular components of the monetary order. In the latter case, it may be directed at the monetary authority's or government's trustworthiness. For instance, the public, or key actors in the public, come to doubt the moral integrity or the technical-administrative competence of the authority to regulate and maintain a stable, effective currency, or to regulate and guarantee the performance of the banks and the banking system. Or a new party or political leadership comes into power perceived by the business and banking communities as lacking a commitment and/or competence to manage the monetary order. Yet, another pattern is that there emerge radical changes (shocks) in the behavior of economic actors or in the performance of the money system, which raise doubts about the established authority's capability to handle the emergent problems; there is increased uncertainty, and a perception of new dangers and risks. Therefore, public trust in the monetary order declines.

Institutionalized definitions of reality, and the specific "social facts" central to a monetary order do not simply depend on rules and sanctions. They depend also on the *definition and framing of reality*. And such a definition is accomplished through a variety of cognitive and interactive mechanisms that operate more invisibly than many institutionalized social control and sanctioning mechanisms. Such a definition is of strategic importance, since the effective performance -- and indeed the right and proper functioning of the social order -- depends on participants' patterns of action and interaction. They orient, make judgments, and act on the basis of a particular definition of the situation, a particular framing that derives from their beliefs and judgments -- that the monetary order and its key components -- functions as it should. Thus, convergence of expectations and public trust stabilize a definition of reality, which makes for more or less orderly or patterned behavior and which then contributes to maintaining or reinforcing their trust. This complex feedback – which involves a complex of social and cognitive mechanisms -- makes for relatively robust (but nevertheless vulnerable) social orders. Spreading distrust, as we have seen, can rapidly undermine an order.

Because of this, policymakers and regulators not only orient their policies and measures to "hard data" such as interest rates and quantity of money, credit and debt expansion. But they orient them to stabilizing or reinforcing *collective trust in the viability of money, banks, and the monetary order*. Multiple institutional, regulative,

and image-management strategies are used to establish and maintain trust in a monetary order, its key agents, and the monies themselves. For example,

(i) *Professionalism*. There is a stress on the professional ethics, competence, and standards of the institutions and, in particular, their policymakers, managers, and experts. The latter are supposed to know -- and to be skilled in applying or enforcing -- rational, institutionalized rules and principles for generating proper and effective performance, including ways to regulate the system. There is not only a stress on technical competence and skill but also on an ethics of performance. Power will not be abused or exploited for personal gain. It will not be carelessly applied. Professionalism is the watchword.[33] It concerns not only technical competence but also the quality of honesty and moral fortitude.

(ii) *Certification*. Expertise and professional knowledge and skills are certified. Certification concerns, of course, formal education and the receipt of degrees. But there is also frequent certification by authorities and regulative agencies (e.g. bank inspectors) of the competence and integrity of banks, managements, regulation, etc.[34]

(iii) *Image management*. Trust in monetary systems, banks, the currency, authorities and money managers is generated in part through the systematic requirements and controls -- expectations and collective belief formation -- that they are expected to meet certain standards, that they are certified and can be expected to behave in role-appropriate ways. These standards and controls are emphasized in numerous public discourses. Efforts are made to project images consistent with the required technical competence and moral qualities of the institutions and their agents. The images are defended against public attacks or even suggestions of incompetence, ethical ambiguity, or corruption. Uncertainties and ambiguities are interpreted and clarifications provided. Obvious deviants are condemned.[35]

(iv) *Regulation*. There are elaborate regulative arrangements, which are emphasized and given publicity in image management. The authorities, the banks, and the bank managers operate controls -- to a certain degree ritualistically -- in order to assure the public that the institution, and its agents, are performing properly and effectively: That their capabilities are maintained, that any shortcomings or failings have been corrected and that future performance and functioning can be relied on.

(v) *Coercive function*. A modern state often requires that accounts be domestic currency accounts; that economic agents accept payment of debts or purchases in the domestic currency, etc. A multiple of practices are generated that reinforce or help maintain a particular social reality -- consistent with the institutionalized definition of reality and strategic "social facts" of the monetary order. Of course, the state may find it difficult, under some conditions, to enforce this mechanism -- or to convince people to comply with it, as the emergence of black money markets point up.

(vi) *Depositor security net and other institutional arrangements*. One example of a security net that contributes to stabilizing monetary orders is a central insurance agency for depositors, insuring their deposits against bank failure. Knowledge that the central bank or the government will operate as a bank of last resort and intervene to save a bank from a crash performs the same function.

In sum, a network of mechanisms and controls operate to maintain and stabilize public trust in the monetary order. The limitations of regulation and stabilization are discussed in the following section. Here, we examine particular institutional arrangements as mechanisms to stabilize public trust in monetary orders.

3. Institutional Facilitation and Maintenance of Public Trust in a Monetary Order.

As suggested above, a major systematic factor in establishing and maintaining trust in banks and a banking system is an institutionalized security net against bank malfunctioning or failure. This is accomplished through laws, policies, and other

institutional arrangements (prudential regulation) that serve to reinforce and stabilize public trust in the monetary order, in particular the liquidity of banks. They operate to counteract or negate destabilizing rumors or movements -- and make banks and the banking system less vulnerable to movements of distrust or actions such as "runs" on banks. Particular arrangements that stabilize the institutionalized definition of the situation, the realization of strategic "social facts" of the banking order, are, for example, the establishment of a central deposit insurance agency or a bank of last resort, the central bank with substantial powers. Thus, deliberate institutional mechanisms and controls offset or regulate self-fulfilling prophecies through which distrust or fears are translated into reality (Merton, 1957:490). Examples of such measures for stabilizing monetary and banking systems are:

(i) Banks only loan out money with shorter repayment periods than the periods which depositors have bound themselves to leave their money in the bank (it is essential that the deposit periods be legally binding or constrained by effective penalties).

(ii) Banks loan out money only to borrowers who provide readily liquefiable collateral. Moreover, the procedures for banks to claim that borrowers have defaulted and to take over the collateral are made sufficiently short to meet likely incoming claims of depositors. More broadly the criteria used to determine whether a loan application is accepted might de-emphasize the collateral or security and stress instead the borrower's potential to generate enough income (whether generated from the acquisition financed from the loan itself or from other sources) to service (pay interest and repay principal) the loan. Tightening of such criteria may be prompted by the threat (or the actuality) of a financial crisis.

(iii) A bank of last resort, e.g. the central bank or a central deposit insurance agency, is available to guarantee deposits in all banks up to a certain amount.[36] As Saunders (1994:303) stresses, "Regulators have long recognized the *inherent instability of the banking system* due to the all or nothing payoff features of the deposit contract. As a result, regulatory mechanisms are utilized to ease the liquidity problems of banks and to deter bank runs and panics. The two major liquidity risk insulation devices are deposit insurance and the discount window. In the case of the USA, deposit insurance has effectively deterred bank panics since 1933."

Institutional arrangements and banking policies, such as (i) and (iii) which are widely practiced today, provide better grounding -- more institutional support -- for the belief and trust in the liquidity of banks. Therefore, a rumor -- and spreading belief -- in a bank's inability to meet the claims of depositors would be much more likely to be falsified in contemporary institutional reality than under the conditions prevailing in Merton's original case. In this sense, the shared belief corresponds to -- or has validity with respect to -- socially constructed and maintained conditions in a particular historical, institutional context.

4. Bounded Rationality and Bounded Control: Limits of Regulating and Monetary Orders

People have varying degrees of trust—which is typically high in most OECD countries -- in large-scale, complex, technocratic systems such as nuclear power plants, air traffic control systems, railway systems, highways (with bridges and tunnels, etc), medical systems, the monetary order, etc.). Nevertheless, these complex, socio-technical systems are vulnerable to accidents and major material and social losses. The discussion here suggests, among other things, the complex interweaving of economic, political, and socio-cultural processes and conditions, the limits, vulnerabilities, risk zones of a socio-technical system such as a monetary order -- in terms of how it is put together, managed and operated, and sustained.

- Modern money-systems are administered on the basis of an incomplete *model or knowledge of the system*. The system is all-too-complex; it is also undergoing frequent, in some instances substantial, change.
- The policymakers and managers -- even with adequate knowledge levels -- lack complete *operative control*, in part because complex, unintended and unanticipated interactions take place without their knowledge; but even with knowledge, they have limited means to intervene properly and effectively.
- Agents participating in the system learn, develop new perceptions, new strategies, which impact on and change the system (that is, through organic processes).
- The policymakers and regulators may abuse their authority and trust in order to solve other problems such as societal conflicts, e.g. by printing banknotes to finance massive government projects including wars, generating inflationary pressures and growing loss of confidence in and distrust of the money and monetary order.
- There is a general risk of instability and disorder. Loss of trust in the system leads to flight from the currency and "runs" on banks. When a binding definition of the situation no longer applies, there is a threat of a crash. Often distrust and loss of confidence start locally, or in particular networks and spread (as with the diffusion of a belief or technology). And a self-fulfilling process based on spreading counter-beliefs emerges and grows in significance.

In general, knowledge of complex socio-technical systems is typically bounded and the human capacity to control such systems imperfect. First, there is the simple and well-understood problem that actors learn and experiment and develop or create new strategies and ways of manipulating the world, that is exhibit *human agency*. This often produces results that cannot be understood very well in advance because they are quite literally beyond the experiential and knowledge bases of existing models and their creators. [37]

A regulative model is never complete, and institutional regulative measures or devices are never fail-safe. New problems arise for which there is no language, conceptions, etc. to describe and analyze them. It follows that policy makers and managers of the system must constantly update their model(s) of the system, how it works, what can go wrong, what dangers and risks there are, and what measures can be used to deal with various types of key or strategic problems. Sooner or later, however, failure occurs (as in the case of the regulation and management of other large-scale, complex socio-technical systems). And this makes for challenges to create or develop a new model (possibly, even a new framework) and new control mechanisms are tried, discarded, revised, developed. This sets in motion the evolution of the model as well as regulative measures (DeVille and Burns, 1976; Burns and Dietz, 1992b). One learns, acquires knowledge-by-doing, through a type of intelligent trial and error.

The transformations of interaction conditions confront those involved with new experiences and anomalies for which established models tend to provide ineffective or invalid interpretations and guidelines. The problem is common to all complex, dynamic socio-technical systems, particularly when conditions change, and participating agents innovate, by introducing new technologies and developing new strategies: namely, established regulative models and measures come more and more to mismatch with the emerging conditions and increase the risks of mis-regulation and performance failures (Burns and Dietz, 1992b).[38]

One of the ways such mismatches arise is through a *regulative dialectic* (Kane, 1981). For instance, initial regulation is followed by a search for and exploitation of loopholes on the part of those affected or other agents. This results in

further regulatory adjustment, the discovery of new loopholes, and so on. The characteristic feature of the regulative dialectic, as discussed in the economics literature, is evasion. For example, bank holding companies in the USA have been subject to federal restrictions concerning geographical spread and product (service) diversification. Bank lawyers then developed a strategy to charter banks according to state (rather than federal) law. But the banks had to be constructed in such a way that they failed to satisfy the federal legal definition of a bank. This could be done by having such banks not engage in one or more proper banking activities, e.g. commercial lending, that are required in the federal definition of a genuine bank. In this way, a quasi-bank could escape federal jurisdiction. This loophole was eventually closed by redefining "bank" in the law. It came to be defined as any institution which obtains federal deposit insurance, which is essential to banks operating in the USA. In this way, the episode of the "non-bank banks" was brought to an end, ending a particular regulative dialectic.

Another example is the catastrophic consequences of the de-regulation of the savings and loan institutions in the USA in the 1980s. The motivation of this policy -- and underlying legislation -- was to reduce the differences and increase competition between the commercial banks and other financial institutions, and, in particular, to redress the disadvantages faced by savings and loan associations. However, a substantial number of savings and loan associations discovered -- and took advantage of -- much increased lending powers and took on significantly greater risk, even though their experience in making various new kinds of loans was very limited and technically inadequate. Also, there were increased opportunities for purely criminal or near-criminal intentions. This set the stage for the massive failure of many savings and loans associations -- and the need for a subsequent bailout by the U.S. government (motivated by economic as well as political considerations, since many ordinary, middle-class people had their life savings on deposit in these associations).

Over time the regulators accumulate, of course, practical (and scientific) knowledge of the systems, their agents and interactions, which they are to regulate. However, there will always be limits to this knowledge, above all in connections with innovations and entrepreneurship among actors participating in and affecting the performance and development of the money system.[39]

In general, new technologies, new agents or conditions of social action and interaction -- e.g., a powerful social agent or movement emerging with an alternative conception of appropriate social reality or exploiting opportunities provided by new technologies -- set the stage for patterning social activities and experiences which are likely to invalidate conventional beliefs, models and statements about social reality. Prior to the emergence and actions of the new agent(s), established beliefs and practices corresponded to the action conditions and enjoyed a relatively high probability of validation. But in the context of emerging, transforming circumstances, *ruling truths* fail, and the stage is set for new formulations about social reality, that is new ruling truths appropriate for the emerging order (with its particular selective environment).

VI. SUMMARY AND CONCLUSIONS

Several of the main points made in this paper are:
(1) A monetary system is a specific *social order* created and maintained through institutional arrangements, technological devices, and human agency. The effective functioning of a monetary system also contributes to maintaining and reproducing other institutions and institutional arrangements, e.g. property rights (Admassie and Burns, 1996), large-scale markets, networks of enterprises, trade and industry, taxation systems, government, etc.

(2) The *institutional alchemy of modern fiat money* involves the transformation of essentially worthless pieces of paper or symbols in a ledger into money. This requires that money systems be constituted and regulated in systematic ways. A number of security problems are addressed through a network of laws, prudential regulations, and controls that are instituted in order to avoid or minimize risks and to maintain security. The maintenance of collective belief and trust are key conditions for stable, robust money systems, since there can be no stable, predictable monetary order -- and other orders such as property rights and budgetary systems -- if strategic actors and substantial parts of a modern society distrust and lose faith in the money or the money system.

When there is trust in the system and general confidence in its money -- a *dynamic social equilibrium* obtains. A network of processes -- formal/"legislative" as well as organic/"spontaneous" -- operate to establish and maintain the monetary order in such an equilibrium. Under some conditions, destabilization may occur and confidence in the money, its face value, or in the system as a whole is eroded or collapses. In light of money systems viewed in an historical perspective, the establishment and maintenance of public trust in a money and money system on the part of money-holders and users is essential. Because of the vulnerability of monetary order to movements of distrust and potential instability -- with dangers and risks of substantial economic losses and social and political instability -- heavy doses of institutionalized regulation and management are often established, and required.

(3). Modern money systems are then not simply spontaneous orders. They entail the *organized social construction and regulation of money and money processes*. The paper has focused on the institutionalized processes whereby social definitions of reality, of social and institutional facts, in this case "fiat money" are made to stick.

(4) The social construction of modern money combines in complex ways *a purposive, legislative-type process with an organic, diffused process*: (i) The process is legislative in the sense that an authority -- the state or a central bank -- defines a paper or other material as a unit of money and formulates policies and administers the money system. (ii) It is organic in the sense that money is "validated in use or in practice" through the multiple transactions of large populations that contribute to defining reality and are to a large extent outside the control of the monetary authority. Thus, it is not simply enough for an authority, for example the state or powerful economic interests such as the commercial banks, to designate that certain paper is money having more or less a particular value. To make this determination binding requires a whole set of social construction and control mechanisms. But social practices and interactions operate to validate the definition and to make the definition binding. Money and money systems become social facts -- and social structures -- more or less enduring and predictable. They are also beyond the control of non-government agents, although powerful private (as well as government agents) may strongly influence the process.

(5) *Money, as a technology*, can be considered in the same way as any artifact or tool which enables human agents to act and interact more effectively, to solve certain problems, to make individual and collective gains that otherwise would not be possible, or would be much more costly. For instance, money, overcomes some of the problems of barter, allowing for a multitude of indirect relationships and a highly developed division of labor at the same time that it plays a key integrative function in modern differentiated society (see later). Moreover, the money technology serves as a generalized means of defining, standardizing, and systematizing a certain type of value, "exchange" or "market-value".

(6) *Universalizing Characteristics of Money; Universal Particularizing and Indexing Processes*. Money is constructed and developed as a universalizing symbol system, a symbol system often operating in a highly decontextualized manner. Among other things, it translates particular (or local) substantive values into universal values. The

universalizing features of money are, however, often exaggerated, as Zelizer (1994) rightfully emphasizes. Money introduced and flowing in particular social and institutional contexts is used -- through social indexing or earmarking processes -- for substantive- or use-values, specific programs and projects. This e particularization of the use of money is especially visible in organizations in their budget processes and in accounting systems (Baumgartner and Burns, 1982). Particularizing processes entail then the use of generalized money purchasing power-- with its universal exchange-value -- into substantive- or use-values: first, as indexed or earmarked accounts or budgets -- that are associated with or linked to particular plans, projects, programs -- and then into concrete realizations of plans, projects, and programs, by utilizing the corresponding accounts or budgets. In turn, some of the projects and activities may result in the acquisition of money assets: either through market or through administrative/budgetary processes. Thus, commodities, plans, projects, or particular objects, which have potential use-values for actors, attract or draw on pools of generalized exchange-money assets.

(7) *Value transformation processes* -- through social institutions and interaction processes -- have been of central interest in this work, for instance the transformation of exchange-value and substantive-values into one another; or, the transformation of market exchange-value into substantive-values in given institutional contexts. A key point in our analysis of money is that money flows and processes entail both universalizing and particularizing mechanisms in the exchange processes. Clearly, money is understood and functions in many contexts in a universalistic -- highly decontextualized manner; but it is also universally subject to re-contextualization, to particularization in its uses, symbolic interpretations and meanings. In other words, particularization and a network of control and regulative processes operate at the same time, in competition with or in opposition to universalization processes. In many cases, the latter must be constrained and regulated if particular social arrangements and boundaries are to be sustained. In general, there are normative as well as micro- and macro-political aspects to money use and money flows.

(8) *Modern monetary order(s) are large-scale, complex socio-technical systems*, calling for sophisticated, rational. and dynamic regulation. A regulative regime entails a certain minimum level of social or collective discipline over the money creation and regulation processes. For example, the government or agency exercising this power must exercise restraint in not exploiting (at least excessively) the *powers of money creation*, by printing money in order to finance government deficits resulting from major projects, welfare programs with institutionalized entitlements, resolution of conflicting income demands among major societal groups, war, etc The result of abuse of the money creating power is powerful inflationary pressures and destabilization of the monetary order (Baumgartner and Burns, 1980, 1984; Baumgartner et al, 1981,1986).

Effective management and operation of a system entailing dangers and risks requires *a model of the money system and its mechanisms*. It also requires institutional arrangements and strategies to identify types of dangerous problems and to carry out measures to deal with them, in short to minimize risks and to enhance the security or the sense of security. This is accomplished to a certain extent through effective image-management and the type of self-fulfilling beliefs and prophesies. (section III). A major problem historically with monetary orders -- instability and the threat of collapse -- is that new complex, large-scale systems emerge, but the regulative means are often inadequate or unreliable. There may be no powerful or authoritative agent responsible for the system and capable of effectively regulating it. They may lack sufficient knowledge about how the system functions or the particular dangers and risks involved or, even with such knowledge, they may not know -- or lack the skills to utilize -- the best institutional arrangements and regulative measures for effective

regulation of a monetary system. These limitations are not publicly stressed, nor is the historical pattern of banking crises and monetary system failures.

(9). *Money serves a number of purposes that are typically contradictory*. There is continuous dialectics around money creation and money use. One of the major sources of instability and risk with money and money systems -- and a challenge to money system managers -- is precisely the multiple purposes to which money is put and the different meanings associated with it: medium of exchange, storage of value, an empowering factor in economic expansion, an asset providing opportunity for speculation, for supplying means of capital, etc. Contradictions between purposes and goals (e.g. stable money value versus adequate growth in credit or money for the purpose of economic development; or stability of the exchange rate for keeping inflation under control as opposed to allowing-for-devaluation to stimulate exports and economic growth) evoke predicaments, equivocation, and sometimes inconsistent, irregular decision-making. Historically, as suggested in section IV, this has led at times to "irrational" management of money systems, and to their ultimate failure or breakdown. Actions taken to deal with particular dangers may even result in amplification of the problems, rather than resolution of them and stabilization of the monetary order. Part of the problem, as we show, is not only a lack of regulative measures or tools but also the lack of adequate conceptualization of money and models of money systems. Our perspective has, therefore, *practical epistemological and methodological implication s.* The models of any complex, dynamic system are always incomplete and tend, in addition, to become increasingly misleading and possibly altogether obsolete over time. Institutional arrangements and regulative measures also tend to prove inadequate. Part of the problem is that in any socio-technical system, human actors exercise their agency developing new conceptions and strategies which alter the system, making it a different system than the one represented in an initial model This leads inevitably to a gap between the model and the emerging interaction patterns and their consequences. Regulative measures executed within the perspective of the model fail to function as they did in the past because of the changes in actors' perceptions, their interactions, and system flows and developments.

(10) *Societal differentiation* -- in our dynamic institutional perspective -- results in the expansion of the number of distinct domains characterized by different institutionalized substantive or use-values and constituted and regulated by particular rule systems and money indexation processes. Zelizer (1994:142) suggests such a development, "As the world becomes more complex, some things do of course standardize and globalize, but as long-distance connections proliferate, for individuals everywhere life and its choices become more, rather than less, intricate..... That is why we can expect new forms of earmarking to multiply with social change. To the extent that money does become more prominent in social life, people will segregate, differentiate, label, decorate, and particularize it to meet their complex social needs." In a word, social differentiation entails an expansion and elaboration of institutionalized values, and of value transformations between institutional domains. Actors in different domains give different meanings to money use as well as to their activities. Social life is increasingly fragmented.[40]

Ironically, while the money-nexus is a key factor in societal differentiation -- and contributes to disruption and disorder of core value processes -- it enables solutions or partial solutions to many of the integration problems (and, therefore, provides an empowering capacity for social problem-solving). That is, a major integrating mechanism in modern society are precisely the money mediated transactions: Money as a universalizing medium of exchange allows for a nexus of exchanges, transfers, distributions and redistribution of exchange-value not only among particular agents or groups of agents, but among the many different social domains and sectors of a modern, differentiated society. In this sense, money functions in the way

that most economists conceptualize it. *In sum, money mediated relations and processes while contributing to the division of society also integrate it* (cf. Dodd, 1994)

ENDNOTES

1. Precious metals have enjoyed widespread use as money, owing not only to their intrinsic value but to material features such as convenience of handling, durability, and divisibility.

2. Units or standards of account (such as those used within an administrative system or the earlier ECU of the European Union) need not function as a generalized means of exchange; rather they are for accounting purposes. Such accounts may, however, imply or be translated into actual sums of money.

[3] Economists distinguish between "fiduciary" money , issued by some public authority or publicly mandated autonomous body and "scriptural" money issued by the private banking systems and based on its assets. Our point is that *both* are ultimately based on trust and implicit social contracts.

[4] On Aglietta and Orlean, see the interesting review by Grahl (1999).

[5]One of us (Burns) wants to stress that people, in using money in particular institutional domains such as family, local community, educational and research settings, government, business enterprises, etc, operate with institutionalized classification systems making meaningful distinctions and earmarking money for meaningful purposes in each domain (Zelizer, 1994). Such institutionalized mechanisms -- for each domain -- regulate generalized legal tender and transform it into particular monies and institutionalized values. An amount of money -- possessing an exchange value -- is transformed into potential [or actual] concrete projects, activities, and interaction orders embodying or realizing *substantive- or use-values*. Thus, a family may have categories such as "petty cash", "children's allowances", "summer vacation money", "family savings", "retirement or pension fund" (these may be made more or less inaccessible through various devices, such as designated accounts with banks, insurance companies etc.). (Zelizer, 1994). Thus, the money symbols are complemented with other symbols and meanings.

The designated or earmarked monies have particular meanings and are to be used in particular ways in a group or organization and, therefore, loose some of their universalistic potentialities (at least within the given institutional and normative constraints). *Money regulation reflects the symbolic and practical consequences of a given social order* (Zelizer,1994; Burns et al, 1972). Universalistic money is particularized within a given institutional domain, and actors try to determine and regulate the use of money according to the social order with its categories, beliefs, norms, values, and the symbolic meanings of actions (such as the particular appropriate or legitimate uses of money in that context). At the same time, there are universalizing pressures, in some cases with agents seeking to exploit the universalizing features of money-value and to break through and erode the constraints and normative order essential to particularization (see below on the politics of these processes). In other words, particularization and a network of control and regulative processes operate at the same time, in competition with or in opposition to universalization processes. In many cases, the latter must be constrained and regulated if particular social arrangements and boundaries are to be maintained and reproduced.

6. The differentiation into various spheres of influence also played a role in *internal* limitations on the accumulation of power and the domination of big men. A big man's followers often have had other alternatives available, in the form of other big men they could follow. Also, in some cases, when the big man overstepped himself, a number of his supporters banded together to establish a countervailing power. In the end this group might kill the big man (Pospisil, 1963).

[7] One of the authors (Burns) emphasizes the societal importance of processes of commodification and de-commodification. There are many obvious parallels in the modern world to the constraints on the exchange of money for **tabu**. Laws and norms restrict the use of money in transactions that violate important community values and norms (Burns and Flam, 1987; Burns, 1995). It is not only illegal but considered morally wrong to commodify government policies or court decisions. Of course, ”markets” for political services can and do arise; there are also circuitous ways that such "exchanges" can be arranged. In modern societies, many potential (or historically available) "commodities" are outlawed or considered anathema. In a certain sense, there is a *de-commodification* -- the imposition of restrictions on those entities for which money can be exchanged. There are typically, for example, restrictions on the acquisition and sale of human beings (that is, slavery or trading in infants), body parts, sexual services, child labor, etc. Human sperm and artificial insemination are decommodified in Sweden (at the same time that "sperm markets" have been successfully established in several states in the USA) (Burns and Flam, 1987). Of course, powerful special interests may underlie to a greater or lesser extent such restrictions, but the moral component -- and moral discourses referring to it -- are of great significance in the regulation, and particularization, of money exchange in modern society.

8.We are developing a general theory of value and value transformation, showing the role of institutions, rituals, and discourses in particular transformations. This concerns not only the production and use of valuables, but also ways in which value is enhanced, or depreciated (desecrated, contaminated, etc.).
9. A business enterprise is expected to be rationally oriented to profit. If profits fall below the value that bank interest brings, then the investors or top management may consider transferring the capital to a bank. However, many enterprises involve projects, activities, etc. which key groups in the organization, including management, identify with and derive meaning from, etc. Therefore, they do not behave in a perfectly "rational-economic way". Similarly, managers or key agents may assume a religious or other educational role, or aim to create a community with strong loyalties etc. While this may, in part, be motivated in economic terms, it is impossible to make precise calculations about gains, etc. Faith or belief plays then an essential role -- but some of this may not be motivated on economic grounds, but on grounds of transcendental values. Of course, how far this may go will depend on the type of economic environment in which the enterprise or its management find themselves (Burns and Dietz, 1992a).

10. Karl Marx explored ideas along these lines. But he -- and many following him -- lacked the institutional and cultural theories to describe and analyze value nexuses and value transformations.
11 Value transformations are a sociological universal. One of the authors (Burns) wishes to stress that key value transformation(s) in any institutional domain are typically oriented to maintaining and reproducing *the core values of the institution* through investments of human efforts and money assets. These transformations are to a great extent institutionalized in particular activities, projects, and social relationships. Thus, the family uses money to provide, among other things, for ceremonies of solidarity, unity, and intimacy in order to produce or maintain key family symbols, including the "sense of home", the collective experience of fairness and justice, the dramaturgy of solidarity, etc. A religious community or organization transforms money into acts, programs, projects -- as they see it -- serving God, salvation, the complex of substantive-values that they represent or wish to represent. Some of these activities may entail religious education of children, missionary work in other countries or regions, providing charity to the poor, etc. In all of these cases, money assets are a means -- and often a highly particularized means. Capitalist enterprises ideally pursue the growth of money value for its own sake, formulating plans, projects, and programs with this in mind. The "meaning of money" in this case is precisely its general exchange-value, its empowering capacity and, in particular, its role in capital investment and accumulation of capital. This can take extreme, hegemonic forms when all other values are subordinated or sacrificed to such money-value pursuits. The activities of a business enterprise activities are in the purest case only a means to an end. In practice, of course, those involved -- including even enterprise owners and top managers -- may assign other non-monetary meanings to their activities and concern themselves with intrinsic aspects of enterprise activities, projects, and programs. At the same time, many of those involved in the enterprise may have little or no conception or insight into the money value nexus and value-transformations organized within the enterprise.

12. The distinction between *designed, formally organized* (and often hierarchical) institutions and *informal, organic, and spontaneous or emergent* (and frequently non-hierarchical) forms has a long history in the social sciences. It pits Hobbes and the concept of deliberative, legislative action against Hume and Adam Smith (and the notion of the aggregation of local activities). In the first case, a deliberative, authoritative collective decision is made to form explicit rules and policies. The second form is populational, informal, and network-like, consisting of a multitude of small acts, decisions, and events that, in the aggregate, generate patterns, and even bring about changes -- but where no one deliberately or intentionally brings about the changes on the aggregate or macro-level. Hayek, among others, contrasts the planned/designed/organized institutions as opposed to the spontaneous, emergent ones..

In everyday language, these types of structuring processes are the top-down and the bottom-up processes (Burns, 1995, footnote 17). In the first case, social agents, including the state, deliberately and explicitly establish an institutional order, for example, a monetary order or a particular market rule regime regulating market access, products and transactions. In some instances, rules are designed to protect the interests of particular economic agents, money holders, creditors, debtors, buyers and/or sellers and possibly third parties. Of course, the rules may actually reflect special interests or a dominant coalition trying to adance their particular interests by limiting (or expanding participation and/or levels of transaction). (It is of course often difficult to disentangle public and private interests in the formation of market rules and procedures). This is *a designed or "legislated" social order*.

In organic processes structuring relationships and patterns of interaction, norms and procedures as well as strategies emerge out of actors' discovering or learning and developing locally certain strategies and procedures. That is, ordered patterns result from the aggregate effects of local strategic actions. Actors come to adopt and share certain norms and understandings through their interactions. This is an *organic social order*.

In organizational theory (Burns and Stalker, 1961; Perrow, 1986) one finds also the distinction between mechanical versus organic forms of organizing and managing. While there is considerable ideological overtones with these distinctions, there are also serious attempts to understand and explain the conditions under which one form or the other emerges, is maintained and reproduced.

Some combination of the two processes, that is a dialectical interplay between formally designed and organized and informal, organic processes is a characteristic feature of the structuring and restructuring of money systems as well as markets (and other institutions as well).

13.The value of a given amount of a currency may rise or decline relative to another currency or to a package of commodities (defining or providing a standard of consumption value, that is, money appreciation or depreciation (inflation). This market value is typically defined relative to a selected set of goods and services so as to ascertain "price stability" (for analyses of inflation and inflationary mechanisms from a socio-economic perspective, see Baumgartner and Burns, 1980, 1984; Baumgartner et al, 1981,1986; Burns et al, 1987).

The relative value of money -- its explicit purchasing power (e.g., with respect to the package of commodities referred to above) -- can be analytically distinguished from its empowering capacity. The later refers not so much to its "exchange value" but to the scope of its applicability. Scope refers to the extent of its capacity to be used in exchange for other objects, to initiate projects, programs, etc. in a complex, differentiated society. Wide scope implies a great power of money in society. A limited scope -- and therefore limited empowering capacity -- means that the money can be exchanged in the society only for a relatively narrow range of things, and therefore, under its control provides more limited societal power. The constraints on scope may be the result of normative controls discussed earlier or technical/structural constraints. In the latter case, for instance, most exchanges in society might take place through barter and administrative mechanisms rather than through money-mediated processes.

14. The aim of the construction of models of different market systems -- in this case, money markets -- is to develop an *empirically* (including historically) oriented theory of markets, for instance by showing in precise ways the impact that belief and value systems and institutional arrangements have on supply, demand, price levels, price dispersion, volume of trade, and development of the market over time (Burns, 1995) (a type of computational economics (Leijonhufvud, 1993))

15. There is a scale of involvement or dependence of the system on the orientations, beliefs, and judgments of large numbers of actors. In the money system, the users, holders, exchangers of money are essential to the functioning -- the ongoing performance of the system, as discussed above in the case of self-fulfilling prophesies. The development or spread of distrust toward the money order, its agents, or the money itself -- that is, doubt or disbelief in their proper and effective functioning, for whatever reasons this arises -- tends to undermine the functioning of the system, and increase the likelihood of a general collapse or crisis. Actors desert the system if they believe it necessary to protect their resources or interests. This is the start of a "monetary crisis".

16. For example, one may trust a banking system, e.g that in the USA today. This generalizes to particular banks, in which one would be prepared to place trust or have confidence. Still, actual performance of a particular bank -- one's actual experience with it or a negative assessment by banking experts -- might decrease public trust in that particular bank. On the other hand, the replacement of the old management with a new one endorsed by the banking community would probably raise the status of -- and trust in -- the bank. Yet, a major world banking crisis -- or a major political crisis in the USA bringing to power major critics of the banking system prepared to change it -- would probably increase doubts and distrust about the future performance of USA banking as well as about particular banks. Again, there is no single, once and for all fixed or stabilized "trust". There is a *dynamic field*, with crests and troughs.

17. In a complex differentiated society, most people have little or no knowledge or information about most institutions, agents, technologies, and processes. Moreover, their capabilities to obtain such knowledge or information are very bounded. Hence, the key role of public trust in the functioning of paricular institutions and agents as well as functioning of the system as a whole. This in part explains why trust has developed into a major concept in sociological theory (Giddens,1990; Luhmann,1979).

18. In Merton's view, the belief that the bank could not meet its obligations was false in that the banks were in a reasonably liquid state. However, as a definition of the situation, it became true. In such terms, he evokes the 'Thomas Theorem' that, if human actors define a situation as true, it becomes true in its consequences.

19. A *bank run* is technically defined as a sudden and unexpected increase in deposit withdrawals from a bank; such sudden surges in net deposit withdrawals risks forcing a bank into insolvency (Saunders, p. 302). Such panics also causes a flight to safe assets such as government bills and real estate or gold.

20. Any bank in the USA at that time could operate in the way Merton describes, in part because of a shared belief in bank liquidity among its depositors. Thus, it could loan out more than the money deposited (since some proportion of the loans remains deposited with the bank, or returned to the bank through transactions. Furthermore, depositors do not normally claim their deposits at the same time). Besides the stability of the bank's "core" deposits, there is also the access to so called purchased funds (or bought funds), as a major modern day source of liquidity. Here rather than passively await the arrival of additional deposit funds, the financial institution actively solicits and raises additional funds on the open markets.
21. Economic or political developments often play a key role in generating uncertainty and eroding the shared belief in a money order. This provides the fuel for risk judgments.

22. But also, new cognitive frameworks and models are essential to the emergence of new institutional arrangements.
23. It is interesting to note, as Friedman and Schwartz (1963:164) that banks in 1907 were much more vulnerable than at any earlier time because of the steady expansion of credit. The ratio of deposits to currency had tripled between 1879 and 1907.
24. The new system had particular implications for center/periphery relations. It further strengthened the power of the large eastern city banks (more concerned with providing the adequate expansion of credit required by the process of capital development and capital accumulation) in relation to the small local and country banks (more concerned with the stability of the medium of exchange).
25. Aside from an upper-bound for this stock of money which was imposed by the gold exchange standard, this was largely ineffective (see Friedman and Schwartz, 1963:192)
26. An indication of this is that, among the several Federal Reserve Banks created by the Act, the New York Bank was dominant in policymaking, later on supplanted by the Board located in Washington.

27. Friedman and Schwartz (1963:192) quote the testimony of Laughlin (Federal Reserve Board) in Congress, indicating the priority of credit expansion over maintaining a stable medium of exchange: "..it is primarily a question of the organization of credit rather than a question of creating essentially a medium of exchange... the organization of credit by discounting institutions must be the core of the reform and the elasticity of currency would follow it."
28. Between August, 1929 and March, 1933, the money supply decreased by approximately 30% See Gordon (1974:53).
29. Some, as Friedman and Schwartz (1963:411, 691,692), have argued that such failure was the result of mismanagement and incompetence of individuals. This individual or psychological explanation is consistent with the view of regulatory processes as purely technical-neutral devices.
30. The failure of this policy finally compelled the Federal Reserve to suspend gold payments in 1933.
31. The failure of the Federal Reserve system to prevent the collapse of the banking system and, moreover, to aggravate the depression led to substantial changes in ideas, values and beliefs. There was a search for new regulatory arrangements better equipped, within the context of a capitalist system (DeVille and Burns, 1976).
32. The examples focus on agents who have options. They can act on the basis of their distrust -- fleeing from what they believe to be a doomed or sinking ship. Some have few or no options, or an alternative entails excessive costs, as they see it.

33. Professions, for example, medical personnel are expected to satisfy moral as well as technical standards. This is the basis of trust in them, and the legitimacy of their authority.
34. Chiropractors are less institutionalized, less clearly certified than physicians. Medical schools, the medical profession exercises control and is able to maintain a higher level of public trust in themselves than chiropractors are able to do.
35. Often, a profession, agency or organization is faced with a dilemma in dealing with failure or significant mistakes. The question is whether to defend the wrong-doer, maintaining a pure or clean professional image, one of reliability, fail-safe, etc. Such image management plays a key role in the stabilization of identities and images (even for the agents, individuals or collectives themselves)(Machado,2000). But there is a risk with such a strategy. If a case comes to public attention, there is an unmasking, possibly a major "scandal" and accusations of "cover-up" and corruption. This sets in motion even more profound questioning -- and potential distrust -- of the profession's, agency's, or organization's capability to regulate itself -- or to be regulated -- and to live up to high standards of performance and security.

36. Moreover, the central bank may be able and prepared to provide additional liquidity in case of serious threat of a run on the bank. But even this is no absolute guarantee. The entire system may be eroded and collapse. DeVille and Burns (1976) show that a state may establish a large-scale system that is more stable than the partial systems, but large scale and potentially more dangerous risks are engendered in the new systems. Indeed, that is the situation with international money systems today. On the one hand, there is high and rapidly growing interdependence ("tight coupling"), but, on the other hand, limited capacity to regulate this international order.
37. The increasing scale and close interdependencies of modern banking systems makes them difficult to understand and control (this is a characteristic feature of large-scale, complicated socio-technical systems as noted by Perrow (1984) and Burns and Dietz (1992b).
38. In contrast, Friedman and Schwartz (1963) viewed the Great Depression as caused by the incompetence of central bank authority. Their point of departure was the concept of a potential, rational agent who goes astray.
39. Actual experience with the performance of the system -- "learning by doing" -- provides a quasi-experiment, but as with all quasi-experiments the lack of adequate control and isolation coupled with the complexity of the system makes the results difficult to interpret. Competing explanations cannot be dismissed. *This is one limit to the improvements that can be made in the models of such complex systems*.
40. Increased differentiation, development of economy-and-society stimulates the development of varieties of money. That is, there is a diversification of monetary instruments and credit facilities in order to meet different requirements or to deal with emerging problems and exploit opportunities. Historically, a great varieties of monetary signs have emerged: bank notes, promises, letters of credit, bills of exchange, promisary notes, cheques, and short-term obligations, etc. In practice on the operative, there are numerous types of monies and quasi-monies created in response to demands, obvious needs, and opportunities.

Moreover, for regulative purposes, a variety of categories and types of money, defined in part for regulative purposes, for instance, M1, M2, M3,....,etc. For example, M1 refers to the sum of all currency and demand deposits held by consumers and businesses; M2 is M1 plus all savings accounts and time deposits as well as limited money market accounts; M3 is M2 plus money market funds held by financial institutions and large denominational time deposits held by financial institutions and corporations.

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